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Assessing and Improving Undergraduate Education in the United States: The National Survey of Student Engagement

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ASSESSING AND IMPROVING UNDERGRADUATE EDUCATION IN THE UNITED STATES: THE NATIONAL SURVEY OF STUDENT ENGAGEMENT

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Since 2000, more than 1,300 baccalaureate-level colleges and universities in the United States and Canada have used the National Survey of Student Engagement (NSSE) to assess, in a manner that permits comparisons with other institutions, the extent to which their undergraduates engage in and are exposed to educational practices associated with high levels of learning and development. I begin this paper with a discussion of dominant conceptions of quality in U.S. higher education and their shortcomings. I then explore the conceptual and empirical foundations of student engagement and the origins of NSSE as both a response to the quality problem and as a diagnostic tool. The mechanics of the survey and NSSE's products and services are briefly described. The paper also discusses tensions between internal improvement and external accountability efforts, and NSSE's role in the assessment and accountability movements. The paper concludes with a discussion of challenges that confront the project going forward, and a brief look at international implementations.

The National Survey of Student Engagement, or NSSE (pronounced "nessie"), was born out of frustration with the dominant conceptions and accompanying discourse about quality in U.S. higher education. The formal quality control mechanism for U.S. institutions of higher education is the accreditation process, a voluntary system rooted in self-study and external peer review that is carried out by a group of specialized private, nonprofit accrediting organizations. Although the accreditation system has undergone some recent changes that have increased attention to student learning, a major complaint over the years has been that quality review standards tend to emphasize capacity and infrastructure over teaching processes and learning outcomes. (For more information about accreditation in the United States, see Eaton, N.D.)

Another, far more public, self-anointed arbiter of quality is the influential "America's Best Colleges" ranking conducted yearly by the newsmagazine *U.S. News and World Report.* The major substantive complaint about the *U.S. News* rankings is that they emphasize reputation and resources, and focus on inputs rather than outputs. (There are also abundant technical and methodological objections, such as false precision of numerical rankings.) As a result, the rankings largely reproduce the conventional wisdom about "quality" which is based on reputation and selectivity rather than any objective measure of teaching effectiveness or value added. Among the top 50 "national universities" in a recent edition, for example, the correlation between an institution's rank and its mean entrance examination score was -.89, indicating that the prior preparation of entering students accounted for nearly 80 percent of the variation in institutional rankings (Kuh & Pascarella, 2004). A further concern has to do with what one critic has called "ranksteering," in which institutions act strategically to improve their position by seeking to influence the measures used in the ranking calculations (for example, attracting more applicants or liberalizing what counts as an applicant to reduce acceptance rates; increasing the importance of test scores in admissions decisions to boost the institutional average; or admitting more students under early decision programs to increase admissions "yield"—the proportion of admitted students who enroll).

The NSSE project was designed to shift the national conversation about quality to focus squarely on teaching and learning, and specifically on those educational conditions and practices shown by decades of research to be linked to student learning (Kuh, 2001). "Student engagement" refers to two critical features of undergraduate education. The first is the amount of time and effort students put into their studies and other educationally purposeful activities. The second is how the institution's resources, curricula, and other learning opportunities support and promote student experiences that lead to success (e.g., persistence, learning, satisfaction, graduation). The latter feature is of particular interest, because it represents the institutional contribution to educational quality and is therefore subject to institutional intervention.

Administered each spring to randomly-sampled first- and senior-year (i.e., final year) undergraduates attending bachelor's degree-granting colleges and universities, NSSE assesses the extent to which students engage in and are exposed to a wide range of effective educational practices, such as collaborative learning, high expectations and prompt feedback on the part of instructors, and coursework that emphasizes higher-order thinking skills. (A companion survey called the Community College Survey of Student Engagement is used at two-year colleges, which offer sub-baccalaureate undergraduate training.) An essential goal of the project is to provide information that institutions can use to diagnose and improve the quality of undergraduate education.

A generous grant from the Pew Charitable Trusts financed NSSE's initial development and subsidized its first few years of operation, but the project is now fully self-supporting through institutional participation fees. Following two years of pilot- and field-testing, the first full-scale national administration was in 2000, with 276 institutions participating. Signifying both the hunger for authentic measures of college quality that permit peer comparisons, and increasing demands that colleges and universities undertake rigorous assessment of student learning, NSSE has enjoyed wide adoption. The number of participants has grown each year, and by 2008 774 colleges and universities in the U.S. and Canada participated, with more than 1.5 million students invited to complete the survey. Since the first national administration, more than 1,300 institutions have taken part in the project.

Designed by a panel of prominent experts in undergraduate education and survey research, the four-page NSSE survey can be completed in about 15 minutes and is administered in both paper and online versions. Participating colleges and universities assemble and submit population files containing student identifiers and contact information for all first- and senior-year students. Random samples are then drawn by staff at the Indiana University Center for Survey Research (CSR), which handles all aspects of survey administration in close collaboration with NSSE project staff. The CSR also provides a password-protected online interface that allows institutional personnel to monitor all aspects of survey administration. Institutions can elect to supplement the random sample with a targeted oversample to permit specialized analyses of subpopulations of interest, but all comparative and national data are limited to randomly-sampled students in the interest of representativeness and comparability. Sampled students receive institutionally-customized invitations and follow-up messages.

The random sampling process described above, uniform across institutions, is an essential component. It increases the likelihood that the data for each institution are fully representative of

its students. This, in turn, permits legitimate comparisons between institutions or groups of like institutions, as well as aggregate national estimates by institution type.

NSSE Products and Services

The current version of the NSSE survey includes 85 items inquiring into students' experiences and activities inside and outside the classroom; the mental activities emphasized in their courses (memorization, analysis, synthesis, and application); their self-assessed learning gains in several domains; the quality of their relationships with other students, faculty, and administrative staff; plus an additional 16 items on their background and enrollment characteristics as well as other contextual information. (The survey instrument can be viewed online at http://nsse.iub.edu/NSSE_2007_Annual_Report/survey_instrument.cfm.) Survey responses are weighted by gender and enrollment status (full- or part-time) to adjust for nonresponse, producing institution-level estimates that reflect first-year and senior populations. In addition, the few items that are based on absolute counts (e.g., amount of reading and writing) are adjusted for students enrolled part-time.

Participating institutions receive detailed reports on their students' responses, with comparisons to customized institutional reference groups, annotated with statistical tests of difference and effect sizes. They also receive a wealth of materials to assist in the interpretation and use of these results, and a data file that can be used for further analysis (for example, to link individual student responses with other institutional records to permit more complex and nuanced analysis). In addition to institutional reporting, the NSSE project issues an annual report that documents the state of student engagement on a national scale, calling attention to both promising and disappointing findings, and providing examples of how institutions are making productive use of their NSSE data and promoting effective educational practices. The annual report provides an occasion for media attention, and it is an important means of advancing the national conversation about college quality. Examples of these materials are available at the NSSE Web site, http://nsse.iub.edu.

To assist institutional users and others in managing and making sense of the large volume of data collected, NSSE project staff have collapsed 42 survey items into five clusters of related items, or "benchmarks of effective educational practice," that tap distinct dimensions of educational quality: level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment. Each benchmark is computed on a 100-point scale to facilitate interpretation, and the five benchmarks are reported separately for first-year and senior students. These benchmarks and their underlying survey items are listed in the appendix.

U.S. colleges and universities vary considerably in their ability to undertake assessment programs and interpret the results. Some institutions—especially larger ones—have well-staffed institutional research offices with considerable analytic expertise, while others have little or no infrastructure and analytic capability for this work. NSSE has been praised as "institutional research in a box," meaning that participation provides any institution with a relatively sophisticated analysis of teaching and learning processes, with national and peer comparisons. Through its Institute for Effective Educational Practice, the NSSE project offers further assistance through regional workshops, webinars, and individual consultations. The NSSE

Institute has also developed a number of print resources to assist institutions in making effective use of their NSSE results. Many concrete examples of such uses have been documented in NSSE's annual reports.

Reflecting NSSE's goal to improve public understanding of college quality, the NSSE Institute also produces "A Pocket Guide for Choosing a College," designed for use by high school students, parents, and counselors (see http://nsse.iub.edu/html/pocket_guide_intro.cfm). The Pocket Guide highlights key questions corresponding to the NSSE benchmarks that students should ask during campus visits. NSSE also produces a parallel "Pocket Guide Report" for participating institutions that contains the answers to those questions drawn from their NSSE data.

As noted earlier, quality assurance in the United States is formally provided through the accreditation system. Because many accreditors now have standards related to assessment processes and learning outcomes, there has been increasing interest in incorporating NSSE into the self-study efforts that are part of the accreditation process. Responding to this need, the NSSE Institute developed a series of "Accreditation Toolkits" that illustrate how selected items from the NSSE survey map to specific standards of the various accrediting bodies.

The NSSE project has also developed several companion surveys, including the Faculty Survey of Student Engagement (FSSE) and the Beginning College Survey of Student Engagement (BCSSE), both of which are designed to complement NSSE. FSSE asks faculty members about their expectations for student engagement in educationally effective practices, and it provides a useful way to bring faculty members into meaningful conversations about NSSE results and how to improve teaching and learning. BCSSE provides baseline data on entering students' high school academic and co-curricular experiences and their expectations for engagement during the first year of college. It can be used in tandem with NSSE to assess the first-year experience.

The Complications of Public Reporting and Accountability

Although NSSE was developed in part as a response to the rankings, early in its development it became clear that most institutions would agree to participate only on the condition that their results would not be made public. This reflects at least three distinct but related factors or dynamics. First is the inherent diversity of U.S. higher education: about 2,400 public and private baccalaureate degree-granting institutions with distinct structures and missions, and considerable variation in their student populations with respect to age, prior preparation, and life circumstances. Many fear that public reporting of results would lead to improper comparisons that would only reproduce the unfortunate consequences of the rankings, in which the wealthiest and most selective institutions reap the greatest rewards. A second dynamic, related to the first, is the heightened sensitivity that exists around any third-party comparisons. This is surely attributable in part to the rankings, but it also reflects institutional leaders' desire to control the "message" about performance and success that can affect access to valued resources, both human (students and faculty) and financial (support from individuals, charitable organizations, and government). The last—and in my view most compelling—factor behind the preference for confidentiality involves the tension between improvement-motivated diagnosis and accountability-motivated performance reporting.

Improvement-motivated diagnosis requires a frank assessment of strengths and weaknesses, and its findings target interventions to improve performance. Such a candid diagnosis presupposes a genuine desire to improve and the consequent need for "the unvarnished facts," that is, information that is accurate, unbiased, and actionable. As long as the diagnosis is confidential, the improvement interests of policy makers, students, and institutional actors are in close alignment, and evaluation by an objective outside party is especially valuable. In the case of accountability-motivated performance reporting, however, this alignment is difficult to achieve. Because unsatisfactory performance can result in punitive actions or externally-imposed directives for change, institutional leaders who want to preserve resources and autonomy will not be enthusiastic about candid and objective assessments (Ewell, 1999). Indeed, such assessments can be very threatening. As noted above, leaders in this situation can face powerful incentives to control the message about performance, accentuating the positive while avoiding or downplaying the negative.

While the NSSE project does not publicize institution-specific results, participating institutions are at liberty to release them, and public institutions are typically obliged to do so under so-called "sunshine" laws. Making information available is not necessarily the same as making it readily accessible, but many institutions have modeled transparency by publishing NSSE results on their Web sites. While systematic data on the release of NSSE findings do not exist, Google searches on the phrases "NSSE data," "NSSE findings," and "NSSE results" limited to web addresses in the ".edu" domain yielded some 4,700 hits after deducting results from Indiana University domains that host project-related sites (searches conducted May 6, 2008). In 2007 the national daily newspaper *USA TODAY* (USAT) and NSSE entered into a collaboration to promote the publication of NSSE results in an online database. USAT approached colleges and universities that had participated in NSSE at least once in the last three years, inviting them to share their benchmark results. Initially, about one-quarter of eligible institutions agreed to participate, and the number or participating institutions has since grown to about one out of three eligible institutions. Although institutions that participated tend to show above-average performance on at least some of the benchmarks (relative to others with the same Carnegie Classification), few institutions show above-average performance on all five benchmarks for both first-year students and seniors.

Accountability in U.S. higher education has been an enduring issue, and in recent years it has emerged as a major concern on the part of policy makers. NSSE was not created as an accountability tool, but it has received prominent mention in this context. In its 2006 report, *A Test of Leadership,* the U.S. Secretary of Education's Commission on the Future of Higher Education (the so-called Spellings Commission) stated:

> *Colleges and universities must become more transparent about cost, price, and student success outcomes, and must willingly share this information with students and families… This information should be made available to students, and reported publicly in aggregate form to provide consumers and policymakers an accessible, understandable way to measure the relative effectiveness of different colleges and universities. (Commission on the Future of Higher Education, 2006)*

NSSE was identified in the report as one of four "examples of student learning assessments" (another one being NSSE's community college counterpart).

As the Spellings Commission was engaged in its work, the two largest national associations representing public four-year institutions, the American Association of State Colleges and Universities and the National Association of State Universities and Land Grant Colleges, announced a significant accountability initiative, no doubt motivated in part by a desire to avoid a government-imposed system. The resulting "Voluntary System of Accountability" (VSA) provides a standard template for public colleges and universities to report a range of descriptive and performance information from specified sources. In the template's section on student experiences and perceptions, NSSE is one of four possible sources of information that participating institutions can use. (For more information on the VSA, see http://www.voluntarysystem.org.)

Challenges Going Forward

Despite the considerable achievements of its first nine years, NSSE faces a number of challenges. Naturally, the project is dependent upon students to complete its surveys, and the credibility of results depends on both representativeness and adequate response rates. Overall, NSSE respondents are sufficiently representative to provide population estimates after weighting (women and full-time students are overrepresented among respondents), but response rates have been a greater challenge. In NSSE's early years, institutional response rates averaged about 42 percent, but in recent years they have declined to as low as 36 percent. (Early indications are that the 2008 administration will show a slight rebound.) This problem is not unique to NSSE. Virtually all undergraduate survey operations have witnessed a decline in response rates among this heavily-surveyed population. NSSE participants have employed a combination of incentive programs and promotional campaigns to boost response rates, but the results have been mixed. Analyses of nonresponse have generally shown little evidence of bias, but low response rates remain a cause of concern. Alternative approaches to survey administration that would address the response rate challenge have been considered, but they involve trade-offs that, to date, have been deemed unacceptable. Offsetting the decline in response rates has been the increasing use of online administration, now accounting for the vast majority of completed surveys. This has afforded substantial increases in institutional sample sizes, with a consequent reduction in sampling error.

While it is gratifying to see media attention to the NSSE project and calls for its wide adoption, there are associated risks. One is the possibility that, as NSSE gains wide acceptance and institutionalization, institutions may adopt it as a matter of compliance or legitimacy-seeking behavior rather than out of a genuine desire for evidence-based improvement. This is one of the reasons why mere participation in NSSE is not sufficient evidence that an institution is committed to the improvement of teaching and learning. More important is what institutions are *doing* in response to what they learn from NSSE (which is why the project gathers and publicizes information about how colleges and universities are making constructive use of their NSSE findings).

Another aspect of media attention is frequent calls to make the data public. In their extreme form, these appeals argue that NSSE results should be the basis for a new, better ranking system. While many institutions have already made their results public, there are several ways that compulsory release of results could do more harm than good. In one version, the public relations cost of participation would exceed the diagnostic benefit, and many institutions would simply opt

out. The other way it could go bad is if NSSE results themselves (as opposed to what they signify) come to define the institutional pecking order. In this version, students' survey responses would determine their institution's position and, by extension, the value of their degree. Students would be tempted to respond strategically so as to enhance their school's standing, and consequently our confidence in their survey responses—fundamental to the project's work—would be severely undermined (McCormick, 2007).

Another challenge for the project—one that is exacerbated by the current accountability climate's emphasis on institution-level performance measures—is the importance of examining within-institution variation in student engagement. Despite strong interest in comparing institutional performance, the simple fact is that 90-95 percent of the variation in student engagement occurs between students within institutions, rather than between institutions (Kuh, 2007). This complicates appealing but simplistic notions of institutional performance. But even a cursory examination of the elements of engagement—what students do in and out of class, the nature of their coursework, their interactions with faculty and other students—reveals that fundamentally, engagement manifests itself at the individual level (student effort and activity in the context of particular courses) or at best among small collectives (e.g., peer groups and by academic major). This is not to say that institutions cannot institute policies and practices that promote engagement, of course (see Kuh, Kinzie, Schuh, Whitt, & Associates, 2005), only that it is wrong to think of engagement as a phenomenon that occurs at the institutional level. A significant imperative for the NSSE project going forward is to find compelling ways to document within-institution variation and to discourage an exclusive focus on measures of central tendency.

Currently, the dominant mode of interpreting NSSE results is relative to a comparison group. But that is only one of three possible comparisons. The other two are trend analysis (comparing an institution against itself over time), and comparisons against an absolute standard. Now that a critical mass of institutions has administered the survey at least three times, the project is developing materials to assist institutions in examining change over time. In some cases, it is also important to assess results against an absolute standard. For example, a fairly consistent finding from NSSE is that students report spending considerably less time preparing for class than what is typically expected or assumed. In such cases, positive results relative to other institutions (above the mean, or even in the top quartile or quintile) may not be sufficient.

Examining the list of institutions that have participated in NSSE over the years, there are some notable absences. The most elite U.S. institutions—the Harvards, Yales, and Stanfords—have opted not to participate. In one sense, this is not a problem because they serve such a tiny slice of the undergraduate population. On the other hand, however, it is a problem, because the elite institutions lead what Christopher Jencks called "the meandering procession" of U.S. higher education, and in that sense what they do matters. Several elite public research universities have participated, as have several elite liberal arts colleges, but overall the most elite and selective institutions have been conspicuously absent. Whether this signifies supreme confidence in their educational quality, or concern over what they might learn, is anybody's guess. When Harvard president Derek Bok, author of *Our Underachieving Colleges* and past member of NSSE's national advisory board, was asked at a symposium on student success why Harvard doesn't participate, he cited the absence of comparable institutions.

Finally, it is important to remember that student engagement as assessed by NSSE is not a "magic bullet." For virtually all of the effective practices represented in the survey, there is a hidden quality dimension that cannot reasonably be assessed in a large-scale survey. In other words, NSSE is neither the only source nor the best source for assessing educational quality. But it is a useful and significant first step toward an informed and legitimate understanding of quality in undergraduate education.

Concluding Comments

Examining student engagement offers a promising response to two vexing problems. The first is the poverty of discourse about quality in U.S. higher education, where dominant conceptions revolve around reputation and resources rather than teaching and learning. The second problem is the lack of consensus around how to assess the quality of teaching and learning in higher education. Direct observation of educational quality is not feasible due to considerable conceptual and practical obstacles. Generic or subject-specific educational outcomes can be measured, but these enterprises are complicated and costly, and it is difficult to translate the results into specific prescriptions for the improvement of teaching and learning. By examining students' exposure to and engagement in practices with empirically-confirmed links to desirable learning outcomes, we can concentrate assessment work on those aspects of educational practice that are vital elements of educational quality. Armed with this information, we can design interventions to improve quality, and thereby improve outcomes.

NSSE's success in the United States has generated interest in other countries. A number of Canadian universities participate every year in the standard NSSE administration. NSSE has also been administered at international locations of selected U.S. institutions and at a small number of English-language institutions in other countries, and it has been adapted for use under licensing agreements in several countries. The most advanced of these adaptations as of this writing is the Australasian Survey of Student Engagement, administered in Australia and New Zealand by the Australian Council for Educational Research (for more information, see http://www.acer.edu.au/ausse/). It will be interesting to see how these ideas travel and take root in other national contexts and educational systems. It is an exciting time.

REFERENCES

Commission on the Future of Higher Education. (2006). *A Test of Leadership: Charting the Future of U.S. Higher Education*. Washington, DC: U.S. Department of Education.

Eaton, J. S. (N.D.). An Overview of U.S. Accreditation. Washington, DC: Council for Higher Education Accreditation.

Ewell, P. T. (1999). Linking Performance Measures to Resource Allocation: Exploring Unmapped Terrain. *Quality in Higher Education, 5*(3), 191-209.

Kuh, G. D. (2001). Assessing What Really Matters to Student Learning: Inside the National Survey of Student Engagement. *Change, 33*(3), 10-17,66.

Kuh, G. D. (2007). Risky Business: Promises and Pitfalls of Institutional Transparency. *Change, 39*(5), 30-35.

Kuh, G. D., Kinzie, J., Schuh, J. H., Whitt, E. J., & Associates. (2005). *Student Success in College: Creating Conditions that Matter*. San Francisco: Jossey-Bass.

Kuh, G. D., & Pascarella, E. T. (2004). What Does Institutional Selectivity Tell Us about Educational Quality? *Change, 36*(5), 52-58.

McCormick, A. C. (2007). *First, Do No Harm*. Retrieved May 6, 2008, from http://www.carnegiefoundation.org/perspectives/sub.asp?key=245&subkey=2349

APPENDIX: NSSE BENCHMARKS OF EFFECTIVE EDUCATIONAL PRACTICE

Level of Academic Challenge

- Number of assigned textbooks, books, or book-length packs of course readings
- Number of written papers or reports of 20 pages or more
- Number of written papers or reports between 5 and 19 pages
- Number of written papers or reports of fewer than 5 pages
- Coursework emphasizes analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components
- Coursework emphasizes synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships
- Coursework emphasizes making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions
- Coursework emphasizes applying theories or concepts to practical problems or in new situations
- Worked harder than you thought you could to meet an instructor's standards or expectations

Active and Collaborative Learning

- Asked questions in class or contributed to class discussions
- Made a class presentation
- Worked with other students on projects during class
- Worked with classmates outside of class to prepare class assignments
- Tutored or taught other students (paid or voluntary)
- Participated in a community-based project (e.g., service learning) as part of a regular course
- Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

Student-Faculty Interaction

- Discussed grades or assignments with an instructor
- Discussed ideas from your readings or classes with faculty members outside of class
- Talked about career plans with a faculty member or advisor
- Received prompt feedback from faculty on your academic performance (written or oral)
- Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)
- Worked on a research project with a faculty member outside of course or program requirements

Enriching Educational Experiences

- Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values
- Had serious conversations with students of a different race or ethnicity than your own
- Institutional emphasis: contact among students from different economic, social, and racial or ethnic backgrounds
- Used an electronic medium (listserv, chat group, Internet, instant messaging, etc.) to discuss or complete an assignment
- Participation in (have done or plan to do):
  - Co-curricular activities (organizations, campus publications, student government, social fraternity or sorority, intercollegiate or intramural sports, etc.)
  - A learning community or some other formal program where groups of students take two or more classes together
  - Community service or volunteer work
  - Foreign language coursework
  - Study abroad
  - Practicum, internship, field experience, co-op experience, or clinical assignment
  - Independent study or self-designed major
  - Culminating senior experience (capstone course, thesis, project, comprehensive exam, etc.)

Supportive Campus Environment

- Institutional emphasis: Providing the support you need to thrive socially
- Institutional emphasis: Providing the support you need to help you succeed academically
- Institutional emphasis: Helping you cope with your non-academic responsibilities (work, family, etc.)
- Quality of relationships with other students
- Quality of relationships with faculty members
- Quality of relationships with administrative personnel and offices